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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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IBM CORPORATION
INTELLECTUAL PROPERTY LAW DEPT.IQOA/BLDG. 040-3
1701 NORTH STREET
ENDICOTT, NY 13760

EXAMINER

SMITH, PETER J

ART UNIT	PAPER NUMBER
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2176

4

DATE MAILED: 10/14/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/892,399

Applicant(s)

CARRO, FERNANDO INCERTIS

Examiner

Peter J Smith

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION:

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 26 June 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to communications: application filed on 6/26/2001, foreign priority document received 6/26/2000, IDS filed 8/13/2004.
2. Claims 1-21 are pending in the case. Claims 1, 11, and 18 are independent claims.

Priority

3. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. **Claims 1-4 and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Robinson et al. (hereinafter “Robinson”), “A framework for interacting with paper”, Eurographics '97, Volume 16, Number 3 – [www.cl.cam.ac.uk/Research/Origami/Origami1997c/index.html], pages 1-9.**

Regarding independent claim 1, Robinson discloses defining a referenced item in an electronic document in sections 3, 4, 4.1, and 4.4. Robinson discloses determining the absolute coordinates of the referenced item in sections 3 and 4.4. Robinson discloses defining a hyperlink to the physical document in sections 3, 4, 4.1, and 4.4. Robinson discloses encoding the absolute

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coordinates in the hyperlink in sections 3 and 4.4. An electronic document and physical document work in tandem in the DigitalDesk to create and animated document.

Regarding dependent claim 2, Robinson discloses encoding an address of a second electronic document in the hyperlink in sections 3, 4, 4.1, and 4.4. The electronic document paired with the paper document contains hyperlinks which point to other electronic resources such as other electronic documents.

Regarding dependent claim 3, Robinson discloses wherein the address of the second electronic document is a Uniform Resource Locator address of a web server hosting the second electronic document. The registry is a server which maintains the hyperlinked documents and the links between them.

Regarding dependent claim 4, Robinson discloses storing the absolute coordinates in a table in sections 3 and 4.4. The each page representation in the registry maintains the associations between the coordinates and the interactors, or reference items, on the page.

Regarding dependent claim 8, Robinson discloses wherein the electronic document is a hyper text markup language document and wherein the hyperlink uses syntactic conventions of hyper text markup language in the abstract and sections 4, 4.1, and 4.4.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

7. **Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robinson et al. (hereinafter "Robinson"), "A framework for interacting with paper", Eurographics '97, Volume 16, Number 3 – [www.cl.cam.ac.uk/Research/Origami/Origami1997c/index.html], pages 1-9 in view of Moran et al. (hereinafter "Moran"), US 6,326,946 B1 filed 9/17/1998.**

Regarding dependent claim 5, Robinson teaches computing camera coordinates from the absolute coordinates of the referenced item in sections 3 and 4.4. Robinson does not teach computing foil coordinates because Robinson uses a camera location system instead of a touch foil system. Moran teaches use of a touch foil system in col. 6 lines 13-19 and teaches wherein the touch foil is used to associate a service with a particular physical location in col. 2 line 50 – col. 3 line 3.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the touch foil teaching of Moran into the DigitalDesk system of Robinson to have created the claimed invention. It would have been obvious and desirable to have used a touch foil instead of a camera system as taught in Robinson so that the location tracking would not have been disrupted by visually blocking the line of sight between the camera lens and the stylus accidentally with the users hand or other object.

Regarding dependent claim 6, Robinson teaches storing camera coordinates in table called a page representation in section 3 and 4.4. Robinson does not teach storing foil coordinates because Robinson uses a camera location system instead of a touch foil system. Moran teaches use of a touch foil system in col. 6 lines 13-19 and teaches wherein the touch foil is used to associate a service with a particular physical location in col. 2 line 50 – col. 3 line 3.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the touch foil teaching of Moran into the DigitalDesk system of Robinson to have created the claimed invention. It would have been obvious and desirable to have used a touch foil instead of a camera system as taught in Robinson so that the location tracking would not have been disrupted by visually blocking the line of sight between the camera lens and the stylus accidentally with the users hand or other object.

8. Claims 7 and 9-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robinson et al. (hereinafter "Robinson"), "A framework for interacting with paper", Eurographics '97, Volume 16, Number 3 – [www.cl.cam.ac.uk/Research/Origami/Origami1997c/index.html], pages 1-9 in view of Musk et al. (hereinafter "Musk"), US 6,148,260 continuation filed 11/8/1996.

Regarding dependent claim 7, Robinson does not teach wherein the referenced item is related to a geographic location; the absolute coordinates include geographic coordinates; and wherein the physical document includes a map. Musk does teach a map document which contains reference items related to geographic locations and identified by geographic coordinates. The map facilitates a user search of business services in a particular geographic area.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Musk into Robinson to have created the claimed invention. It would have been obvious and desirable to have used the map and geographic coordinate teachings of Musk to have improved the enhanced document of Robinson so that the paper

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document of Robinson would have presented a map in paper form which provided geographic coordinates to reference items on the map to help a user find and locate available business services on the map. Maps are traditionally composed of paper and thus would have been a good candidate for use in the DigitalDesk system taught by Robinson.

Regarding dependent claim 9, Robinson teaches computing absolute camera coordinates associated with the referenced items and including the absolute camera coordinates in a hyperlink in sections 4, 4.1, and 4.4. Robinson does not teach computing geographic coordinates associated with the referenced items and including the geographic coordinates in the hyperlink. Musk does teach computing geographic coordinates associated with the referenced items in a map document and including the geographic coordinates in the hyperlink in col. 2 line 66 – col. 3 line 2 and col. 3 lines 42-44.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Musk into Robinson to have created the claimed invention. It would have been obvious and desirable to have used the geographic coordinate computation and hyperlink inclusion of Musk to have improved Robinson so that the map paper document could have been used and interacted with using the DigitalDesk. Robinson teaches absolute coordinates relating to reference items on the document, but not geographic coordinates, because Robinson does not specifically discuss a map example. It would have been obvious and desirable to have enhanced a traditional paper map document with the electronic reference information as taught by Robinson and Musk so that a user could have received detailed information about businesses and services available in the area displayed by the map.

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Regarding dependent claim 10, Robinson does not teach wherein the geographic coordinates include longitude and latitude. Musk does teach wherein the geographic coordinates include longitude and latitude in col. 3 lines 42-44. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Musk into Robinson to have created the claimed invention. It would have been obvious and desirable to have used the longitude and latitude geographic coordinates to have improved Robinson so that the map paper document could have been used and interacted with using the DigitalDesk. Robinson teaches absolute coordinates relating to reference items on the document, but not longitude and latitude geographic coordinates, because Robinson does not specifically discuss a map example. It would have been obvious and desirable to have enhanced a traditional paper map document with the electronic reference information as taught by Robinson and Musk so that a user could have received detailed information about businesses and services available in the area displayed by the map.

9. **Claims 11, 13-15, 18-19, and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robinson et al. (hereinafter “Robinson”), “A framework for interacting with paper”, Eurographics ’97, Volume 16, Number 3 – [www.cl.cam.ac.uk/Research/Origami/Origami1997c/index.html], pages 1-9 in view of Moran et al. (hereinafter “Moran”), US 6,326,946 B1 filed 9/17/1998 and Thompson et al. (hereinafter “Thompson”), US 5,986,401 patented 11/16/1999.**

Regarding independent claim 11, Robinson teaches an electronic document reference item in sections 3, 4, 4.1, and 4.4. Robinson teaches a hyperlink to a physical document within

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the referenced item in sections 3, 4, 4.1, and 4.4. Robinson teaches encoded absolute coordinates of the referenced item within the hyperlink in sections 3, 4, 4.1, and 4.4. Robinson teaches wherein the absolute coordinates identify a location, on a camera-projector system interface, associated with the reference item in sections 3, 4, 4.1, and 4.4 and fig. 1.

Robinson does not teach use of an opto-touch foil because Robinson uses a camera-projector system to read input from the user and display feedback to the user. Moran teaches a touch foil for identifying a location selected by a user's touch in col. 2 line 50 – col. 3 line 3 and col. 6 lines 13-19. Thompson teaches a transparent organic LED (TOLED) display for presenting feedback to a user in the abstract and fig. 2. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Moran and Thompson into Robinson to have created the claimed invention. It would have been obvious and desirable to have used the touch foil of Moran and the TOLED of Thompson to have improved Robinson so that the position could have been sensed and feedback presented to the user without the user's hand or input pen interfering with either the sight of the input camera or the projection of the feedback projector of Robinson.

Regarding dependent claim 13, Robinson teaches wherein the electronic document is a hyper text markup language document, and the hyperlink uses syntactic convention of hyper text markup language in the abstract and sections 4, 4.1, and 4.4.

Regarding dependent claim 14, Robinson teaches encoding an address of a second electronic document in the hyperlink in sections 3, 4, 4.1, and 4.4. The electronic document paired with the paper document contains hyperlinks which point to other electronic resources such as other electronic documents.

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Regarding dependent claim 15, Robinson teaches wherein the address of the second electronic document is a Uniform Resource Locator address of a web server hosting the second electronic document. The registry is a server which maintains the hyperlinked documents and the links between them.

Regarding independent claim 18, Robinson teaches identifying a referenced item in an electronic document in sections 3, 4, 4.1, and 4.4. Robinson teaches identifying a physical document in sections 3, 4, 4.1, and 4.4. Robinson teaches determining the absolute coordinates of the referenced item in sections 3, 4, 4.1, and 4.4. Robinson teaches computing camera coordinates from the absolute coordinates of the referenced item in sections 3 and 4.4. Robinson does not teach computing foil coordinates because Robinson uses a camera location system instead of a touch foil system. Moran teaches use of a touch foil system in col. 6 lines 13-19 and teaches wherein the touch foil is used to associate a service with a particular physical location in col. 2 line 50 – col. 3 line 3.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the touch foil teaching of Moran into the DigitalDesk system of Robinson to have created the claimed invention. It would have been obvious and desirable to have used a touch foil instead of a camera system as taught in Robinson so that the location tracking would not have been disrupted by visually blocking the line of sight between the camera lens and the stylus accidentally with the users hand or other object.

Robinson does not teach use of an opto-touch foil to obtain user input and display user feedback on the physical document. Robinson does not teach use of an opto-touch foil because Robinson uses a camera-projector system to read input from the user and display feedback to the

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user. Moran teaches a touch foil for identifying a location selected by a user's touch in col. 2 line 50 – col. 3 line 3 and col. 6 lines 13-19. Thompson teaches a transparent organic LED (TOLED) display for presenting feedback to a user in the abstract and fig. 2. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Moran and Thompson into Robinson to have created the claimed invention. It would have been obvious and desirable to have used the touch foil of Moran and the TOLED of Thompson to have improved Robinson so that the position could have been sensed and feedback presented to the user without the user's hand or input pen interfering with either the sight of the input camera or the projection of the feedback projector of Robinson.

Regarding dependent claim 19, Robinson teaches storing the absolute coordinates in a table in sections 3 and 4.4. The each page representation in the registry maintains the associations between the coordinates and the interactors, or reference items, on the page. Robinson teaches storing camera coordinates in table called a page representation in section 3 and 4.4. Robinson does not teach storing foil coordinates because Robinson uses a camera location system instead of a touch foil system. Moran teaches use of a touch foil system in col. 6 lines 13-19 and teaches wherein the touch foil is used to associate a service with a particular physical location in col. 2 line 50 – col. 3 line 3.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined the touch foil teaching of Moran into the DigitalDesk system of Robinson to have created the claimed invention. It would have been obvious and desirable to have used a touch foil instead of a camera system as taught in Robinson so that the location

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tracking would not have been disrupted by visually blocking the line of sight between the camera lens and the stylus accidentally with the users hand or other object.

Regarding dependent claim 20, Robinson teaches sending coordinates to the projector that optically highlights a position upon the physical document responsive to the projector coordinates. Robinson does not teach use foil coordinates or an opto-touch foil because Robinson uses a camera-projector system to read input from the user and display feedback to the user. Moran teaches a touch foil for identifying a location selected by a user's touch in col. 2 line 50 – col. 3 line 3 and col. 6 lines 13-19. Thompson teaches a transparent organic LED (TOLED) display for presenting feedback to a user in the abstract and fig. 2. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Moran and Thompson into Robinson to have created the claimed invention. It would have been obvious and desirable to have used the touch foil of Moran and the TOLED of Thompson to have improved Robinson so that the position could have been sensed and feedback presented to the user without the user's hand or input pen interfering with either the sight of the input camera or the projection of the feedback projector of Robinson.

Regarding dependent claim 21, Robinson teaches determining the calibration camera-projector coordinates of a point pressed on the opto-touch foil, which point corresponds to the referenced item, and calibrating the opto-touch foil using the calibration foil coordinates in section 4.2. Robinson does not teach foil coordinates or a opto-touch foil because Robinson uses a camera-projector system to read input from the user and display feedback to the user. Moran teaches a touch foil for identifying a location selected by a user's touch in col. 2 line 50 – col. 3 line 3 and col. 6 lines 13-19. Thompson teaches a transparent organic LED (TOLED) display for

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presenting feedback to a user in the abstract and fig. 2. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Moran and Thompson into Robinson to have created the claimed invention. It would have been obvious and desirable to have used the touch foil of Moran and the TOLED of Thompson to have improved Robinson so that the position could have been sensed and feedback presented to the user without the user's hand or input pen interfering with either the sight of the input camera or the projection of the feedback projector of Robinson.

10. Claims 12 and 16-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robinson et al. (hereinafter "Robinson"), "A framework for interacting with paper", Eurographics '97, Volume 16, Number 3 – [www.cl.cam.ac.uk/Research/Origami/Origami1997c/index.html], pages 1-9 in view of Moran et al. (hereinafter "Moran"), US 6,326,946 B1 filed 9/17/1998 and Thompson et al. (hereinafter "Thompson"), US 5,986,401 patented 11/16/1999 as applied to claims 11 and 18 above, and further in view of Musk et al. (hereinafter "Musk"), US 6,148,260 continuation filed 11/8/1996.

Regarding dependent claim 12, Robinson teaches wherein the referenced item includes absolute coordinates in sections 4, 4.1, and 4.4. Robinson does not teach wherein the referenced item includes a geographic location and the absolute coordinates include geographic coordinates of the geographic location. Musk does teach wherein the referenced item includes a geographic location and the absolute coordinates include geographic coordinates of the geographic location in col. 2 line 66 – col. 3 line 2 and col. 3 lines 42-44.

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It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Musk into Robinson in view of Moran and Thompson to have created the claimed invention. It would have been obvious and desirable to have used the map and geographic coordinate teachings of Musk to have improved the enhanced document of Robinson so that the paper document of Robinson would have presented a map in paper form which provided geographic coordinates to reference items on the map to help a user find and locate available business services on the map. Maps are traditionally composed of paper and thus would have been a good candidate for use in the DigitalDesk system taught by Robinson.

Regarding dependent claim 16, Robinson teaches wherein the referenced item includes absolute coordinates in sections 4, 4.1, and 4.4. Robinson does not teach wherein the absolute coordinates include geographic coordinates. Musk does teach wherein the absolute coordinates include geographic coordinates in col. 2 line 66 – col. 3 line 2 and col. 3 lines 42-44.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Musk into Robinson in view of Moran and Thompson to have created the claimed invention. It would have been obvious and desirable to have used the map and geographic coordinate teachings of Musk to have improved the enhanced document of Robinson so that the paper document of Robinson would have presented a map in paper form which provided geographic coordinates to reference items on the map to help a user find and locate available business services on the map. Maps are traditionally composed of paper and thus would have been a good candidate for use in the DigitalDesk system taught by Robinson.

Regarding dependent claim 17, Robinson does not teach wherein the geographic coordinates include longitude and latitude. Musk does teach wherein the geographic coordinates

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include longitude and latitude in col. 3 lines 42-44. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have combined Musk into Robinson in view of Moran and Thompson to have created the claimed invention. It would have been obvious and desirable to have used the longitude and latitude geographic coordinates to have improved Robinson so that the map paper document could have been used and interacted with using the DigitalDesk. Robinson teaches absolute coordinates relating to reference items on the document, but not longitude and latitude geographic coordinates, because Robinson does not specifically discuss a map example. It would have been obvious and desirable to have enhanced a traditional paper map document with the electronic reference information as taught by Robinson and Musk so that a user could have received detailed information about businesses and services available in the area displayed by the map.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nagai, US 6,138,072 filed 4/22/1998 discloses storing a data table of URLs of home pages established for respective objects existing in the area of a map..

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Peter J Smith whose telephone number is 703-305-5931. The examiner can normally be reached on Mondays-Fridays 7:00am-3:30pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph H Feild can be reached on 703-305-9792. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

PJS
October 5, 2004


JOSEPH FEILD
SUPERVISORY PATENT EXAMINER